

WHAT IS CLAIMED IS:

1. A variable resolution decoder for decoding image data compressed with a compression method such as MPEG-2, said decoder comprising:

means for performing variable length decoding and
5 inverse quantization on the compressed image data;

means for checking a discrete cosine transform mode of a frame and performing inverse discrete cosine transform in 4 by 8 pixels when the mode is a discrete cosine transform mode; and

10 means for acquiring image data of full resolution for interlaced scanning in a vertical direction and thinning interlaced scanned image data to perform image reduction processing during decoding with field information maintained.

2. A variable resolution decoder for decoding image data compressed with a compression method such as MPEG-2, said decoder comprising:

means for performing variable length decoding and
5 inverse quantization on the compressed image data;

means for checking a discrete cosine transform mode of a frame and performing reduction processing in a discrete cosine transform area for resolution of interlaced scanning in a horizontal direction; and

10 means for performing reduction processing in a pixel

area for resolution of interlaced scanning in a vertical direction.

3. The variable resolution decoder according to claim 2, wherein said means for performing reduction processing in said discrete cosine transform area is field inverse discrete cosine transform processing means for performing
5 inverse discrete cosine transform processing in a field discrete cosine transform mode.

4. The variable resolution decoder according to claim 2, wherein said means for performing reduction processing in said pixel area is frame inverse discrete cosine transform processing means for performing inverse discrete
5 cosine transform processing in a frame discrete cosine transform mode.

5. A variable resolution decoder for decoding image data compressed with a compression method such as MPEG-2, said decoder comprising:

means for performing variable length decoding and
5 inverse quantization on the compressed image data;

means for selecting a discrete cosine transform mode;

means for checking a discrete cosine transform mode of a frame and performing inverse discrete cosine

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10 transform in 4 by 8 pixels when the mode is a frame
discrete cosine transform mode; and

means for acquiring image data of full resolution
for interlaced scanning in a vertical direction and
thinning interlaced scanned image data,

15 wherein the image data is decoded such that the
image has lowered resolution at the time of display.

6. A variable resolution decoder for decoding image
data compressed with a compression method such as MPEG-2,
said decoder comprising:

5 means for performing variable length decoding and
inverse quantization on the compressed image data;

means for checking a discrete cosine transform mode
of a frame and performing inverse discrete cosine
transform in 4 by 8 pixels when the mode is a discrete
cosine transform mode; and

10 means for acquiring image data of full resolution
for interlaced scanning in a vertical direction and
thinning interlaced scanned image data,

wherein the image data is decoded such that the
image has lowered resolution at the time of display.

7. The variable resolution decoder according to claim 5
, wherein said means for thinning image data takes only
even-numbered lines of said interlaced scanned image data

and calculates the averages of two adjacent taken lines
5 which are used as data of top field, and takes only odd-
numbers lines of said interlaced scanned image data and
calculates the averages of two adjacent taken lines which
are used as data of bottom field to decode the image data
at halved resolution both vertically and horizontally with
10 field information maintained.

8. The variable resolution decoder according to claim
6, wherein said means for thinning image data takes only
even-numbered lines of said interlaced scanned image data
and calculates the averages of two adjacent taken lines
5 which are used as data of top field, and takes only odd-
numbers lines of said interlaced scanned image data and
calculates the averages of two adjacent taken lines which
are used as data of bottom field to decode the image data
at halved resolution both vertically and horizontally with
10 field information maintained.

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